



XFS Criteria for A- and B-Grade SM Single-Fiber Connectors



XFS Criteria for B-Grade SM Single-Fiber Connectors

Optical Performance

	Random Mated Insertion Loss (Testing Method: IEC 61300-3-34)		Return Loss (Testing Method: IEC 61300-3-6)	
	1310nm	1550nm	APC	UPC
Mean	≤0.12dB		≥65dB	≥55dB
Maximum for 97%	≤0.25dB			

Ferrule's Endface Geometry (3D)

Reference	IEC 61755-3-1 (PC) and IEC 61755-3-2 (APC)			
Parameter	SC/APC	SC/UPC	LC/APC	LC/UPC
Radius of Curvature (mm)	6.5 to 9	10 to 15	6 to 12	7 to 15
Apex Offset (μm)	0 to 40	0 to 40	0 to 40	0 to 40
Fiber Height (nm)	-50 to 50	-50 to 50	-50 to 50	-50 to 50
APC Angle (°)	7.7 to 8.3	/	7.7 to 8.3	/
Key Error (°)	-0.3 to 0.3	/	-0.3 to 0.3	/

Ferrule's Endface Visual Quality

Zone	Range (μm)	Testing Method: IEC 61300-3-35		
		Dirt	Scratches	Defects
A: Core	0 to 25	None	None	None
B: Cladding	25 to 115	None	None	None
C: Adhesive	115 to 135	None	None	None
D: Contact	135 to 250	None	None	None
E: Rest of Ferrule including Edges		None	None	None

XFS Criteria for A-Grade SM Single-Fiber Connectors

Optical Performance

	Random Mated Insertion Loss (Testing Method: IEC 61300-3-34)		Return Loss (Testing Method: IEC 61300-3-6)	
	1310nm	1550nm	APC	UPC
Mean	≤0.07dB		≥70dB	≥55dB
Maximum for 97%	≤0.12dB			

Ferrule's Endface Geometry (3D)

Reference	IEC 61755-3-1 (PC) and IEC 61755-3-2 (APC)			
Parameter	SC/APC	SC/UPC	LC/APC	LC/UPC
Radius of Curvature (mm)	6.5 to 9	10 to 15	6 to 12	7 to 15
Apex Offset (μm)	0 to 30	0 to 30	0 to 30	0 to 30
Fiber Height (nm)	-30 to 30	-30 to 30	-30 to 30	-30 to 30
APC Angle (°)	7.8 to 8.2	/	7.8 to 8.2	/
Key Error (")	-0.2 to 0.2	/	-0.2 to 0.2	/

Ferrule's Endface Visual Quality

Zone	Range (μm)	Testing Method: IEC 61300-3-35		
		Dirt	Scratches	Defects
A: Core	0 to 25	None	None	None
B: Cladding	25 to 115	None	None	None
C: Adhesive	115 to 135	None	None	None
D: Contact	135 to 250	None	None	None
E: Rest of Ferrule including Edges		None	None	None